

**REMARKS**

Claims 1 to 25 were pending in the Application at the time of examination. The Examiner rejected Claims 1, 2, 3, 6, 7, 8, 9, 10, 11, 14, 15, 16, 17, 18, 19, 22, 23, 24, and 25 under 35 U.S.C. 103(a) as obvious over the Dukach et al. reference in view of what the Examiner has termed "Applicants' admitted prior art". The Examiner rejected Claims 4, 5, 12, 13, 20 and 21 under 35 U.S.C. 103(a) as obvious over the Dukach et al. reference (US 6,609,159 B1) in view of what the Examiner has termed "Applicants' admitted prior art" and further in view of the Burkhardt reference (US 4,866,664).

Applicants have cancelled Claims 4, 12 and 20, without prejudice. Applicants have amended Claims 1, 5, 9, 10, 13, 17, 21 and 25. Consequently, Claims 1 to 3, 5 to 11, 13 to 19 and 21 to 25 remain in the Application.

**REJECTION OF CLAIMS 1, 2, 3, 6, 7, 8, 9, 10, 11, 14, 15, 16, 17, 18, 19, 22, 23, 24, AND 25 UNDER 35 U.S.C. 103(A)**

The Examiner rejected Claims 1, 2, 3, 6, 7, 8, 9, 10, 11, 14, 15, 16, 17, 18, 19, 22, 23, 24, and 25 under 35 U.S.C. 103(a) as obvious over the Dukach et al. reference in view of what the Examiner has termed "Applicants' admitted prior art".

Applicants have cancelled Claims 4, 12 and 20, without prejudice, and incorporated elements of these claims into Claims 1, 9, 17, respectively and into Claim 25.

Applicants' independent Claim 1, as amended, reads as follows, with emphasis added:

A method for moving data between processes in a computer-based system, each process calling for one or more symbols in a first library, the method comprising:

associating each process with a second library, said second library comprising one or more symbols with a door interprocess communication mechanism wherein,

said second library enables each process to communicate a synchronization signal through a door, said door enabled by said door interprocess communication mechanism;

intercepting a call from each process for a symbol in said first library; and

redirecting said call to a corresponding symbol in said second library.

Applicants' independent Claim 9, as amended, reads as follows, with emphasis added:

A program storage device readable by a machine, tangibly embodying a program of instructions readable by the machine to perform a method for moving data between processes in a computer-based system, each process calling for one or more symbols in a first library, the method comprising:

associating each process with a second library, said second library comprising one or more symbols with a door interprocess communication mechanism wherein,

said second library enables each process to communicate a synchronization signal through a door, said door enabled by said door interprocess communication mechanism;

intercepting a call from each process for a symbol in said first library; and

redirecting said call to a corresponding symbol in said second library.

Applicants' independent Claim 17, as amended, reads as follows, with emphasis added:

An apparatus for moving data between process in a computer-based system, the apparatus comprising:  
a plurality of processes;  
a first library of symbols having one or more symbols, said plurality of processes calling for said one or more symbols in said first library of symbols;  
a second library of symbols having one or more symbols, said one or more symbols associated with a door interprocess communication mechanism wherein,  
said second library enables each process to communicate a synchronization signal through a door, said door enabled by said door interprocess communication mechanism; and  
an interposer intercepting a call for one or more symbols in said first library of symbols and redirecting a corresponding call for one or more symbols in said second library of symbols.

Applicants' independent Claim 25, as amended, reads as follows, with emphasis added:

An apparatus for moving data between processes in a computer-based system, each process calling for one or more symbols in a first library, the apparatus comprising:  
means for associating each process with a second library, said second library comprising one or more symbols with a door interprocess communication mechanism wherein,  
said second library enables each process to communicate a synchronization signal through a door, said door enabled by said door interprocess communication mechanism;  
means for intercepting a call from each process for a symbol in said first library; and  
means for redirecting said call to a corresponding symbol in said second library.

As shown above, each of Applicants independent Claims 1, 9, 17 and 25, as amended, includes the recited feature of a "second library comprising one or more symbols with a door interprocess communication mechanism wherein, said second library enables each process to communicate a synchronization signal through a door, said door enabled by said door interprocess communication mechanism " or words to that effect.

The Examiner has stated, with emphasis added:

...Dukack (sic) teaches the invention substantially as claimed including: data (information, col 3, ln 35-42), data between processes in a computer-based system (col 6, ln 35-40/col 8, ln 37-42), one or more symbols (OS function 144, col 8, ln 55-62), the first library (the library of the OS 134, col 8 ln 52-55), process calling for one or more symbols in a first library (col 8, ln 58-62), associating each process with a second library (col 8, ln 36-37), a second library (the interposed library, col 8, ln 36-37/ln 60-65), one or more symbols of the second library(the interposed library function col 8, ln 52-65), **interprocess communication mechanism(interprocess communication links, col 8, ln 40-46)**, intercepting a call from each process for a symbol in said first library(col 8, ln 58-65/col 9, ln 24-30), redirecting said call to a corresponding symbol in said second library( col 8, ln 63-65).

Applicants first note that Dukach's column 8, lines 35 to 65 reads as follows, with emphasis added:

The back end server and the interposed library which is linked to it, are one process. The front end server is another. The OS accords each separate process its own separate subspace within the common OS space. **A given process cannot directly write to another process's sub-space, but the OS does let it communicate with another processes in the same OS space through interprocess communication links, or**

pipes. Such pipes are defined and only work within a given OS space defined by a given OS kernel.

Although it is not mentioned elsewhere in this specification, those skilled in the computer arts will understand that the OS normally runs processes in virtual memory, i.e., a memory space larger than that which will fit in RAM at one time, and automatically swaps portions of this virtual memory space in and out of memory from and to the hard disk, as needed for current computations.

As stated above, the back end server is linked to the interposed dynamically-loaded library 116. The back end server is also linked to the library of the OS 134. As is shown in FIG. 10, the interposed library includes functions 144A, such as bind( ), listen( ), and accept( ), having some of the same names as the functions 144 contained in the OS's network library 142. Since the interposed library is linked to the back end server with a higher precedence than the OS's library, if the back end server calls a named OS function 144 for which there is a similarly named interposed library function 144A, the call will be intercepted by the interposed library function. This means the back end server process's program control will go to the interposed library function 144A, rather than to the similarly named OS function 144.

As shown above, Dukach specifically discloses, teaches and suggests that the interprocess communication links are pipes. Indeed Dukach discloses, teaches and suggests that "interprocess communication links" and "pipes" are identical terms by reciting "**interprocess communication links, or pipes...**" Consequently, Applicants respectfully submit that Dukach specifically discloses, teaches and suggests that pipes are the only form of interprocess communication link suitable for use with Dukach's structure and that Dukach specifically rules out, and teaches away from, the use of any other form of interprocess communication link.

Pipes, such as those specifically disclosed and taught in Dukach, are discussed in the "BACKGROUND OF THE INVENTION

SECTION" of Applicants Specification at, for example page 2, line 18 to page 3, line 7. Pipes, such as those specifically disclosed and taught in Dukach, are also shown in Applicants FIG.1, clearly marked a "Prior Art". Page 2, line 18 to page 3, line 7 of Applicants Specification reads as follows, with emphasis added:

Interprocess communication (IPC) is the exchange of data between two or more processes. **Various forms of IPC exists: pipes, sockets, shared memory, message queues, and Solaris™ doors.**

**A pipe provides the ability for a byte of data to flow in one direction and is used between processes. These two processes must be of common ancestry.** Typically, a pipe is used to communicate between two processes such that the output of one process becomes the input of another process. FIG. 1 illustrates a conventional pipe 100 according to a prior art. The output of process 102 becomes the input of process 104. Pipe 100 is terminated when process 102 that is referencing it terminates. Data is moved from process 102 to process 104 through a pipe 100 situated within a kernel 106.

As shown above, Applicants clearly distinguish pipes as distinct from doors and then explain some of the limitations of pipes. The Examiner then goes on to state:

Dukack (sic) does not explicitly teach door (sic). However, APA teaches door (doors, page 5, ln 3-7).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Dukack (sic) to APA because APA's doors would provide the fastest form of interprocess communication for exchange of data between two or more processes.

Page 5 lines 3 to 11 of Applicants' Specification reads as follows:

The fastest form of IPC on Solaris™ Operating System from Sun Microsystems Inc. is doors. However, applications that want to communicate using doors need to be explicitly programmed to do so. Even though doors IPC is very fast, the socket-based IPC is more popular since it is portable, flexible, and can be used to communicate across a network.

A definite need exists for a fast IPC technology that would overcome the drawbacks of doors and socket-based IPC. Specifically, a need exists for a fast socket technology implementation using doors. A primary purpose of the present invention is to solve these needs and provide further, related advantages.

Here again, Applicants have shown a clear distinction between doors, and other forms of IPCs, such as the specifically disclosed pipes of Dukach. However, the Examiner has used this portion of Applicants specification to suggest that, in direct contrast to the teaching of Dukach, the pipes specifically taught by Dukach are, contrary to the teaching of Dukach, to be replaced by doors. Applicants respectfully traverse this assertion and respectfully submit that the proposed combination is improper.

M.P.E.P. section 2143 reads in part, with emphasis added, as follows:

To reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination

whether the claimed invention "as a whole" would have been obvious at that time to that person. **Knowledge of applicant's disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the "differences," conduct the search and evaluate the "subject matter as a whole" of the invention. The tendency to resort to "hindsight" based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.**

ESTABLISHING A PRIMA FACIE CASE OF OBVIOUSNESS

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, **there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.** Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. **The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.** *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.

Applicants respectfully submit that the Dukach reference not only fails to provide any motivation for the combination proposed by the Examiner, but that Dukach specifically teaches away from the use of doors.

In light of the discussion above, Applicants respectfully submit that the proposed combination is improper and that the Examiner is using improper hindsight without the requisite motivation to combine references being present in either the references or the art at the time of the invention.

In addition, as shown above, Claims 1, 9, 17 and 25, as amended, specifically recite a "second library comprising one or more symbols with a door interprocess communication mechanism wherein, said second library enables each process to



**communicate a synchronization signal through a door, said door enabled by said door interprocess communication mechanism " or words to that effect.**

In making the rejection of Claims 4, 12 and 20, now incorporated in amended Claims 1, 9, 17 and 25, the Examiner relied on the Burkhardt reference (US 4,866,664) as an example of a synchronization signal and then stated that it would be obvious to combine this simple bus signal with a second library and send this synchronization signal through a door interprocess communication mechanism that is taught away from in Dukach.

Applicants first respectfully submit that the addition of the Burkhardt reference (US 4,866,664) does nothing to correct the basic deficiency of the Dukach et al. reference (US 6,609,159 B1) and what the Examiner has termed "Applicants' admitted prior art" discussed above. However, in addition, the synchronization signal of Burkhardt is a simple bus synchronization signal with nothing disclosed in Burkhardt regarding a library, a door or an interprocess communication mechanism or any motivation to combine the bus synchronization signal of Burkhardt with any of these elements.

Applicants again respectfully submit that the proposed combination is improper and that the Examiner is using hindsight, without the requisite motivation to combine the references being present in either the references themselves or the art at the time of the invention. In this particular instance, the Examiner is stating that given the disclosure of a simple synchronization signal in Burkhardt one of ordinary skill in the art would have found it obvious to combine this with Dukach's exclusively disclosed pipe IPC, then, contrary to the teachings of Dukach, replace the pipe IPC with a door IPC and then couple a second library that enables each process to communicate the synchronization signal through a door, where the door is enabled by a door interprocess communication

mechanism. Given that none of these combinations are disclosed, taught or suggested in the references themselves, Applicants respectfully submit that such a combination would only occur to one of skill in the art using 20/20 hindsight after reading Applicants disclosure and therefore the proposed combination is again improper.

In light of the discussion above, Applicants' respectfully request the Examiner withdraw the rejection of Applicants' independent Claims 1, 9, 17 and 25, as amended, and allow Claims 1, 9, 17 and 25, as amended, to issue.

Claims 2, 3, 6, 7 and 8 depend, directly or indirectly on Claim 1, as amended. Therefore, Claims 2, 3, 6, 7, 8 include all of the features and limitations of Claim 1, as amended. Consequently, in light of the discussion above with respect to Claim 1, Applicants respectfully request allowance of Claims 2, 3, 6, 7, and 8.

Claims 10, 11, 14, 15 and 16, depend, directly or indirectly on Claim 9, as amended. Therefore, Claims 10, 11, 14, 15, 16, include all of the features and limitations of Claim 9, as amended. Consequently, in light of the discussion above with respect to Claim 9, Applicants respectfully request allowance of Claims 10, 11, 14, 15, and 16.

Claims 18, 19, 22, 23 and 24 depend, directly or indirectly on Claim 17, as amended. Therefore, Claims 18, 19, 22, 23 and 24 include all of the features and limitations of Claim 17, as amended. Consequently, in light of the discussion above with respect to Claim 17, Applicants respectfully request allowance of Claims 18, 19, 22, 23 and 24.

**REJECTION OF CLAIMS 4, 5, 12, 13, 20 and 21 UNDER 35**

**U.S.C. 103(A)**

The Examiner rejected Claims 4, 5, 12, 13, 20 and 21 under 35 U.S.C. 103(a) as obvious over the Dukach et al. reference (US 6,609,159 B1) in view of what the Examiner has termed "Applicants' admitted prior art" and further in view of the Burkhardt reference (US 4,866,664).

Applicants have cancelled Claims 4, 12 and 20, without prejudice, and incorporated features of Claims 4, 12 and 20 into Claims 1, 9, 17 and 25, as amended. Consequently, the rejection of Claims 4, 12 and 20 is now moot except as the rejection applies to amended Claims 1, 9, 17 and 25.

As discussed above, Applicants respectfully submit that the proposed combination is improper and that the Examiner is using hindsight, without the requisite motivation to combine the references being present in either the references themselves or the art at the time of the invention.

Claim 5, as amended depends on Claim 1, as amended. Therefore, Claim 5, as amended includes all of the features and limitations of Claim 1, as amended. Consequently, in light of the discussion above with respect to Claim 1, Applicants respectfully request allowance of Claim 5, as amended.

Claim 13, as amended, depends on Claim 9, as amended. Therefore, Claim 13, as amended, includes all of the features and limitations of Claim 9, as amended. Consequently, in light of the discussion above with respect to Claim 9, Applicants respectfully request allowance of Claim 13, as amended.

Claim 21 depends, directly or indirectly on Claim 17, as amended. Therefore, Claim 21 includes all of the features and limitations of Claim 17, as amended. Consequently, in light of the discussion above with respect to Claim 17, Applicants respectfully request allowance of Claim 21, as amended.

#### CONCLUSION

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Reply to Office Action of September 22, 2005

For the foregoing reasons, Applicants respectfully request allowance of all pending claims. If the Examiner has any questions relating to the above, the Examiner is respectfully requested to telephone the undersigned Attorney for Applicants.

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on February 3, 2005.



Attorney for Applicants

February 3, 2005  
Date of Signature

Respectfully submitted,



Philip McKay  
Attorney for Applicants  
Reg. No. 38,966  
Tel.: (831) 655-0880